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## Measuring outcomes: the Australian experience

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## Measuring outcomes: the Australian experience

### Abstract

#### Overview

- Parallel developments - outcome measurement and casemix
- Parallel development 1 - outcome measurement
- Parallel development 2 - casemix
- Pulling it all together - where we need to be

### Keywords

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# Measuring outcomes: the Australian experience

Professor Kathy Eagar

Centre for Health Service Development

University of Wollongong

The 3rd Australasian Mental Health Outcomes Conference,  
Auckland New Zealand 18-19 November 2010

# Overview

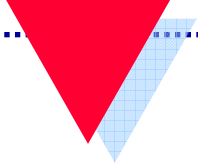
- ◆ Parallel developments - outcome measurement and casemix
- ◆ Parallel development 1 - outcome measurement
- ◆ Parallel development 2 - casemix
- ◆ Pulling it all together - where we need to be

# My starting point - the perversity of parallel universes

- ◆ You can't fairly compare service outcomes without adjusting for the mix of different cases (the 'casemix')
- ◆ You can't get the incentives right in the design of funding and payment models (including casemix payments) without measuring and taking into account differences in service outcomes
- ◆ Despite this and after more than 20 years, we still treat outcomes and casemix as parallel universes!

# Where we are in 2010

- ◆ National health reform in progress (slowly)
  - National Activity Based Funding (ABF) model from 2011 (AKA casemix funding)
    - ◆ Independent Hospital Pricing Authority
  - National Performance Agency in 2011
- ◆ Mental health doesn't quite fit the reform framework
- ◆ Outcomes is implied in the agenda but certainly isn't a strong focus



# Parallel universe 1

Health outcomes

Starting with a refresher on the basics

# Health Outcome

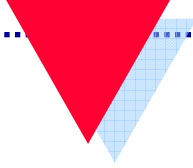
A change in an individual or group of individuals that can be attributed (at least in part) to an intervention or series of interventions

## 3 key ideas:

- ◆ change
- ◆ attribution
- ◆ intervention

*Health Outcome*  
 $\neq$   
*Health status*





Outcomes have to be linked to the  
goal of the intervention

No change, or an arrest in the rate of  
decline, can be a good outcome in some  
cases

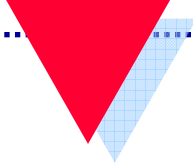
# A Matrix of Outcomes

	Quality of Life			
		Improve	Same	Worse
	Longer	+++++	+	--
	Same	+++		---
	Shorter	++	-	-----

A  
diagnosis  
is not an  
outcome!

# Outcomes assessment can't be a one-off event

- ◆ Need reassessment, based on a protocol:
  - clinical criteria (eg, diagnosis, stage of illness)
  - pre-agreed time periods (eg, each 90 days) or
  - natural bookends (eg, hospital discharge)
- ◆ Types of outcomes at these points:
  - alive or dead (level 1)
  - better or worse (level 2)
  - better or worse than expected (level 3)
  - value for money (level 4)



# Some starting points for outcome measurement

Based on our experiences

# Utility

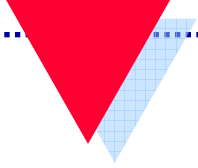
- ◆ The Australian health system cannot afford to collect data for only one purpose.
- ◆ Good reasons to collect data:
  - immediate use with a consumer - screen, assess, diagnose etc
    - ◆ help consumers to get the right services at the right time
  - information sharing - common language (including with consumers) and referral
  - priority setting - eg, waiting list management
  - pay and accounting for health care

# Possible system level uses of data

- ◆ Outcome measurement and evaluation
  - not sustainable purpose in its own right
- ◆ Benchmarking
  - not sustainable purpose in its own right
- ◆ Accountability and reporting
  - regarded in the field as just more paperwork
  - can be fudged if not a by-product of information collected for other purposes

# If you want data for outcome evaluation and benchmarking:

- ◆ Start by designing measurement suites that are useful for other purposes:
  - immediate use with a consumer - screen, assess, diagnose etc
    - ◆ help consumers to get the right services at the right time
  - information sharing - common language and referral
  - priority setting - eg, waiting list management
  - paying for health care - funding, payment etc



Outcomes occur at different levels

And can be evaluated at different levels

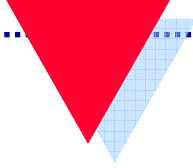


# Outcomes and evaluation hierarchy

- ◆ 'Process, Impact and Outcome' not enough
- ◆ Level 1: Impact on, and outcomes for, consumers
  - patients, carers, families, friends, communities
- ◆ Level 2: Impact on, and outcomes for, providers
  - professionals, organisations
- ◆ Level 3: Impact on, and outcomes for, the system
  - structures and processes, networks, relationships

# Hierarchy of measurement

- ◆ Level 1: Impact on, and outcomes for, consumers
  - measured at the person-level and the organisational level
  - capacity to benchmark at the organisational level
- ◆ Level 2: Impact on, and outcomes for, providers
  - some measurement possible (eg, workforce competency, availability, satisfaction, turn-over)
  - but little or no systematic benchmarking
- ◆ Level 3: Impact on, and outcomes for, the system
  - benchmarking ideas not currently at this level (eg, sustainable systems)



# A development cycle for outcomes assessment and benchmarking

But it's a bit more chaotic in practice!

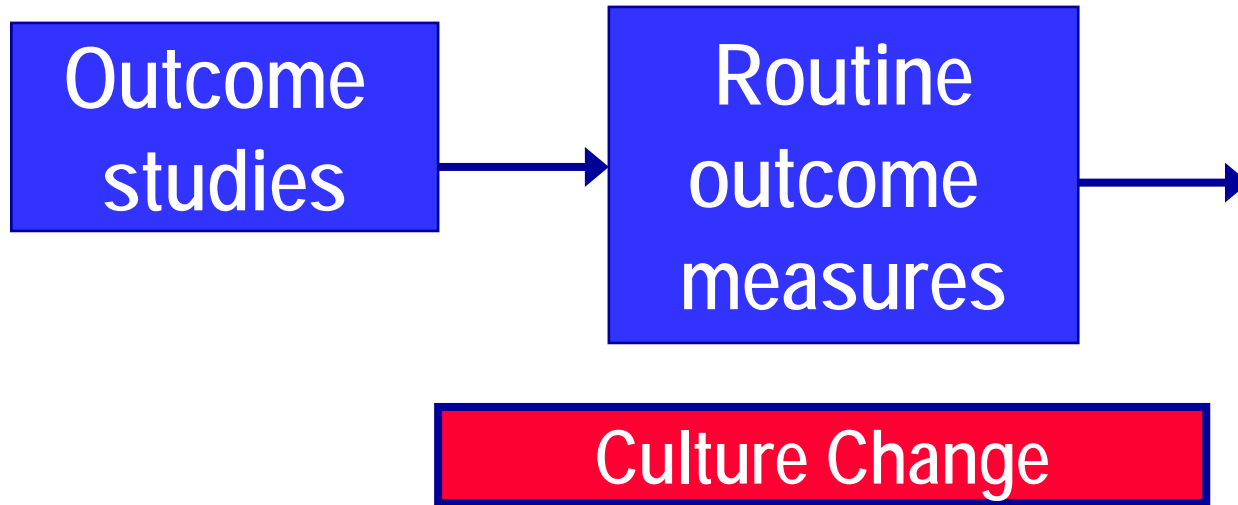
One off studies

Outcome  
studies

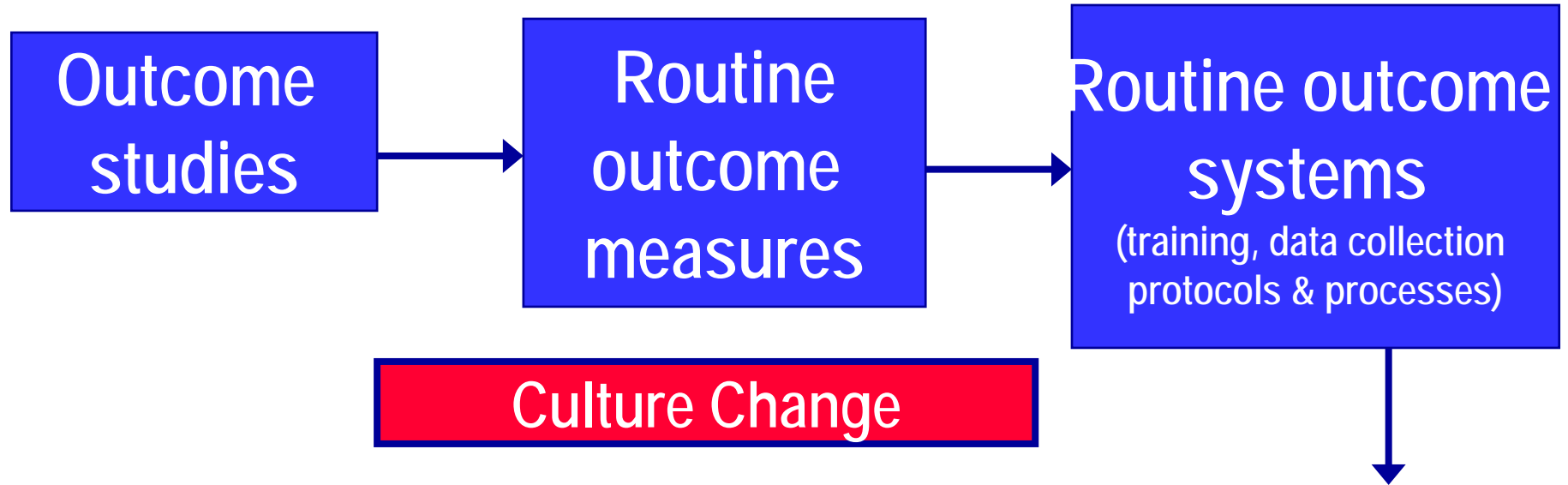


Culture Change

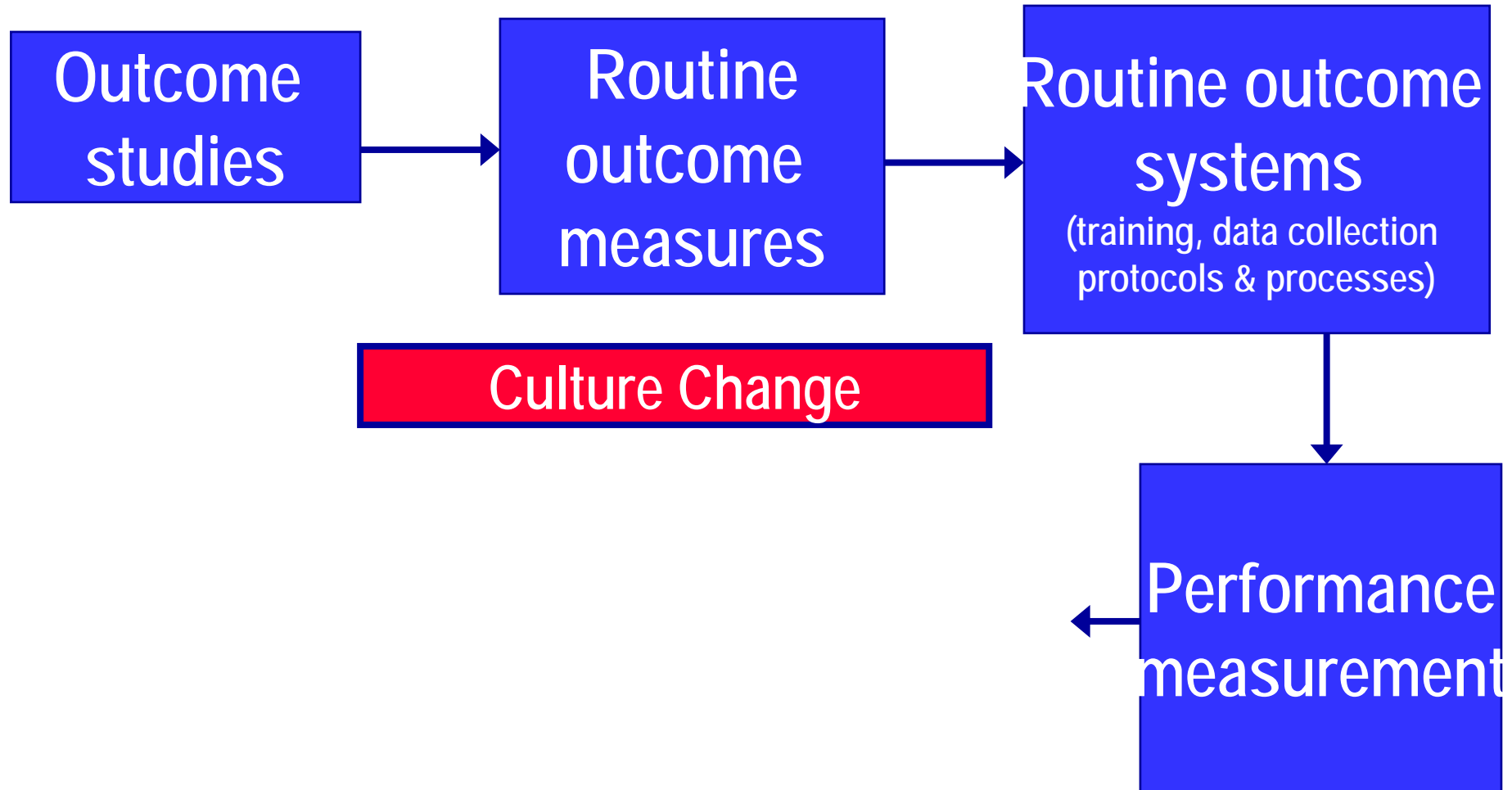
# Routine measures



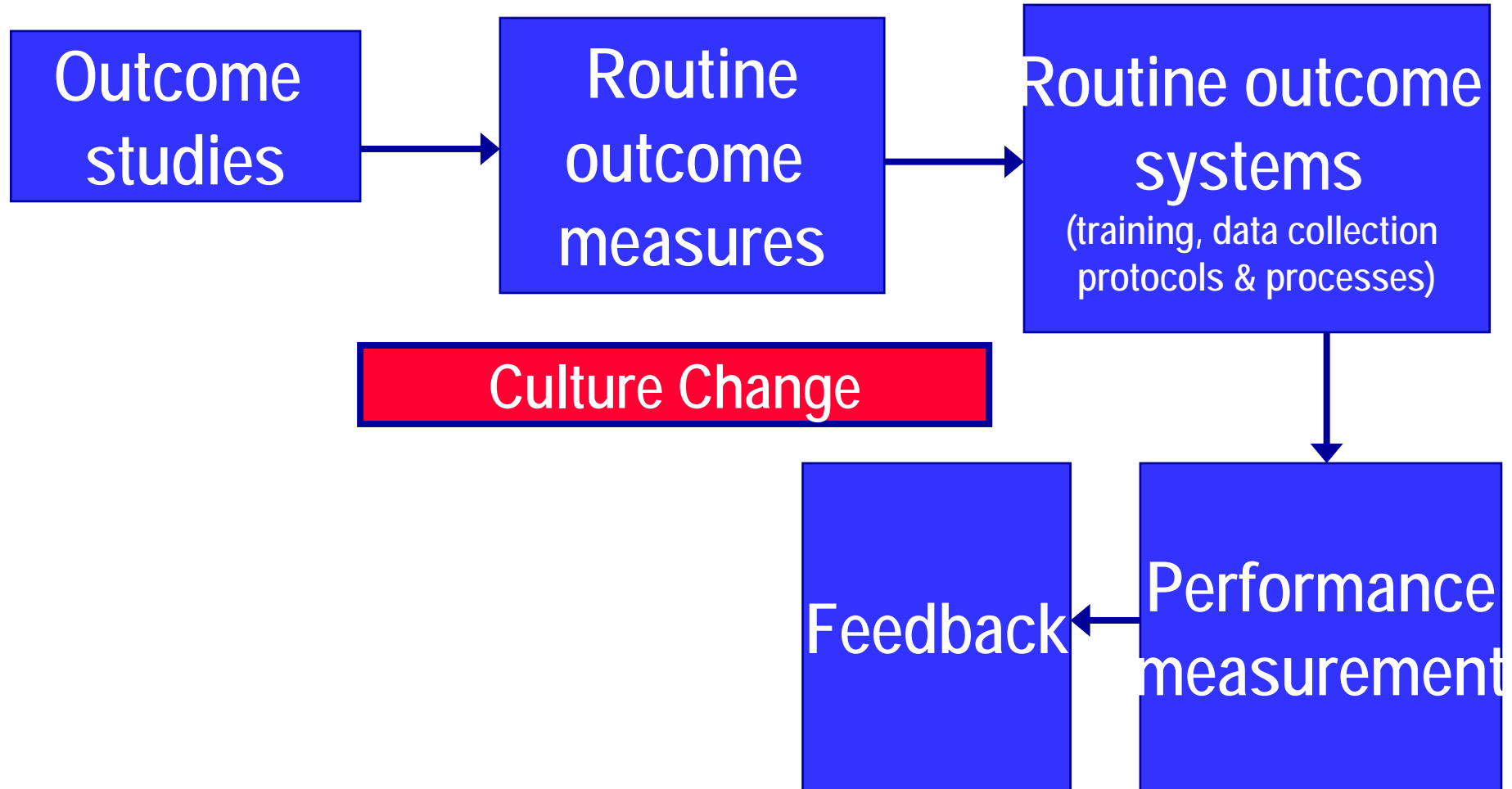
# Routine systems



# Measurement

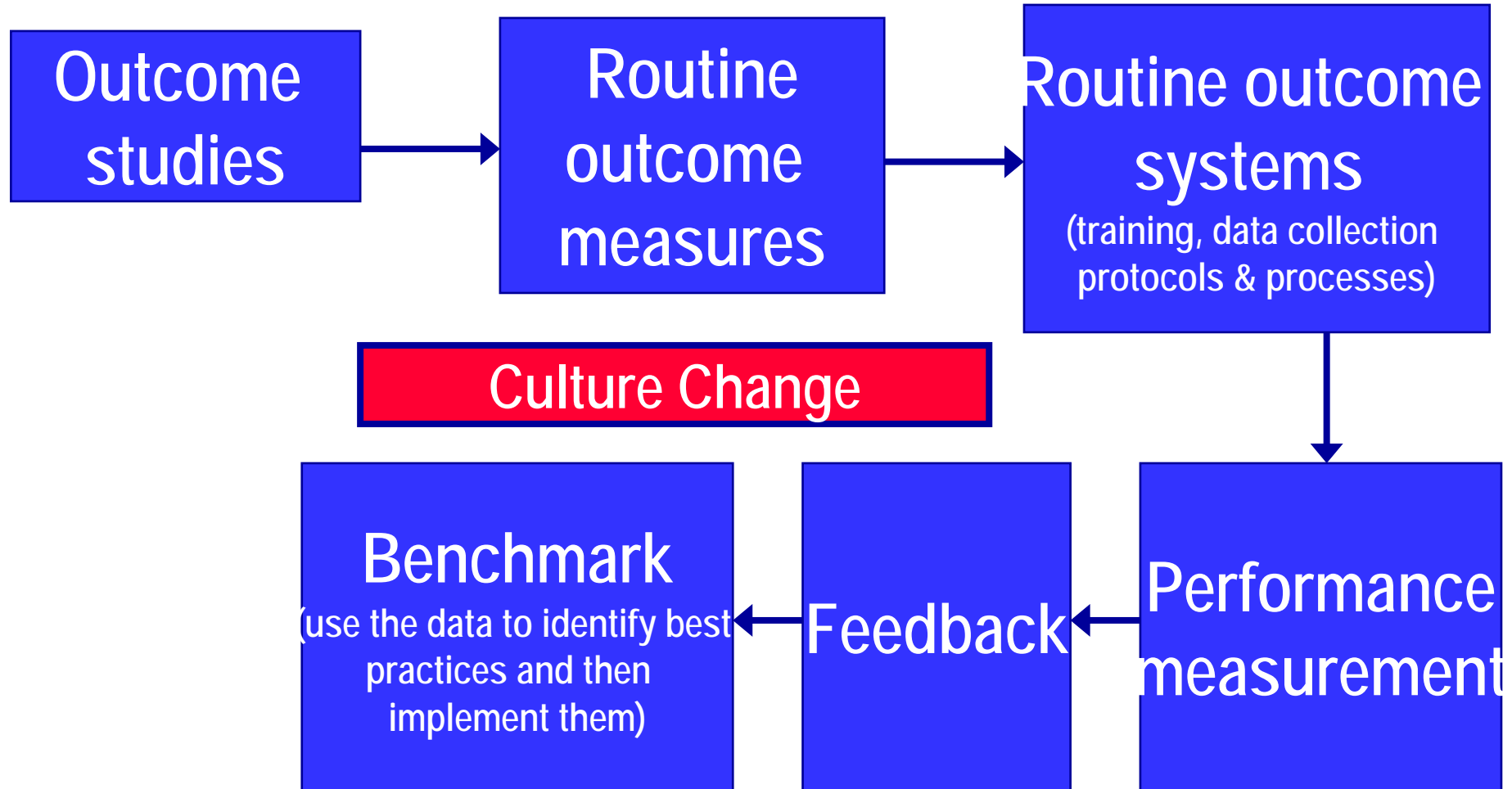


# Feedback

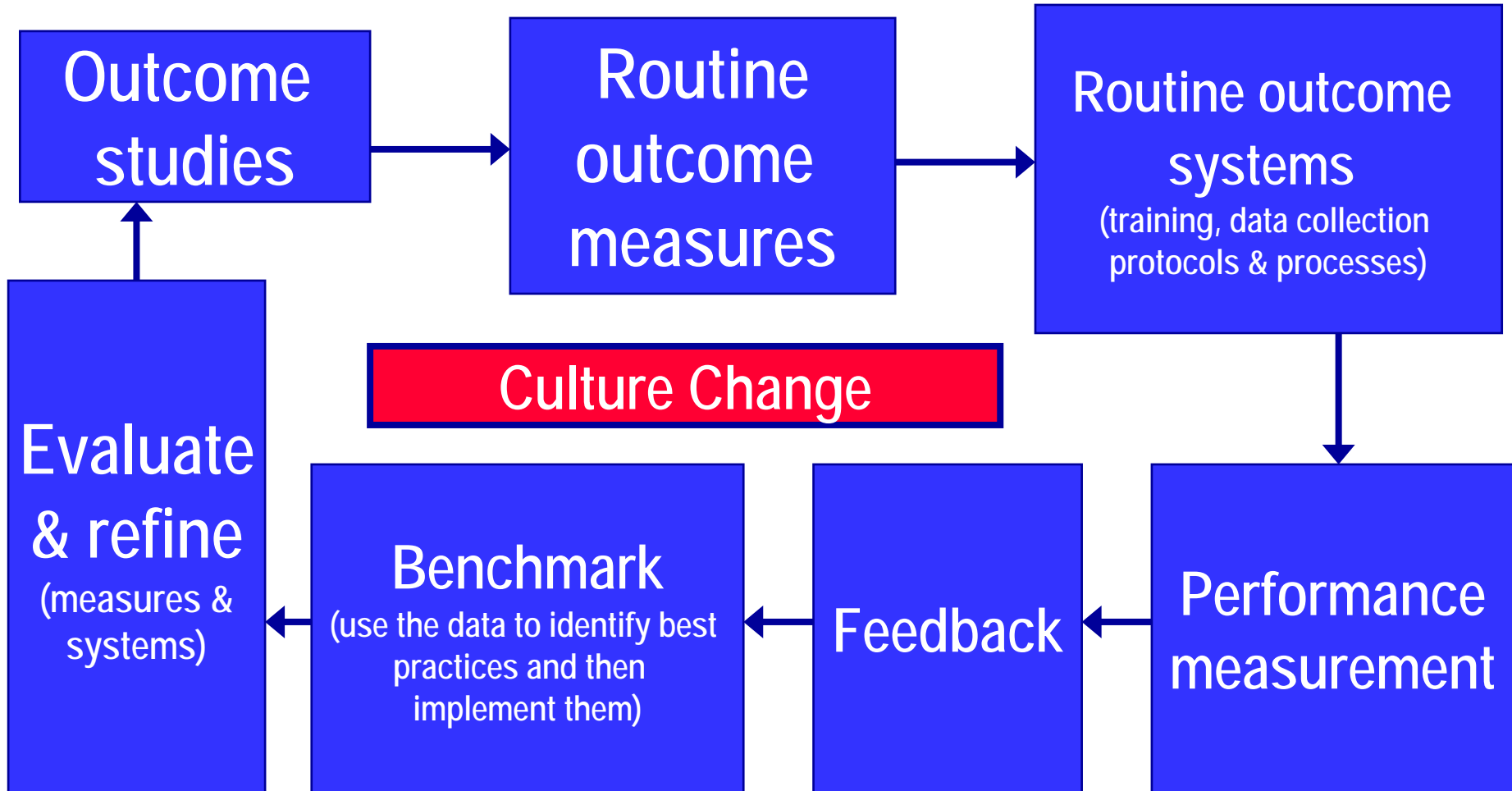




# Benchmarking



# The benchmarking cycle

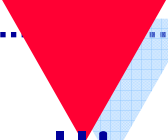




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# Palliative Care Outcomes Collaboration (PCOC) as an example of a routine outcomes system

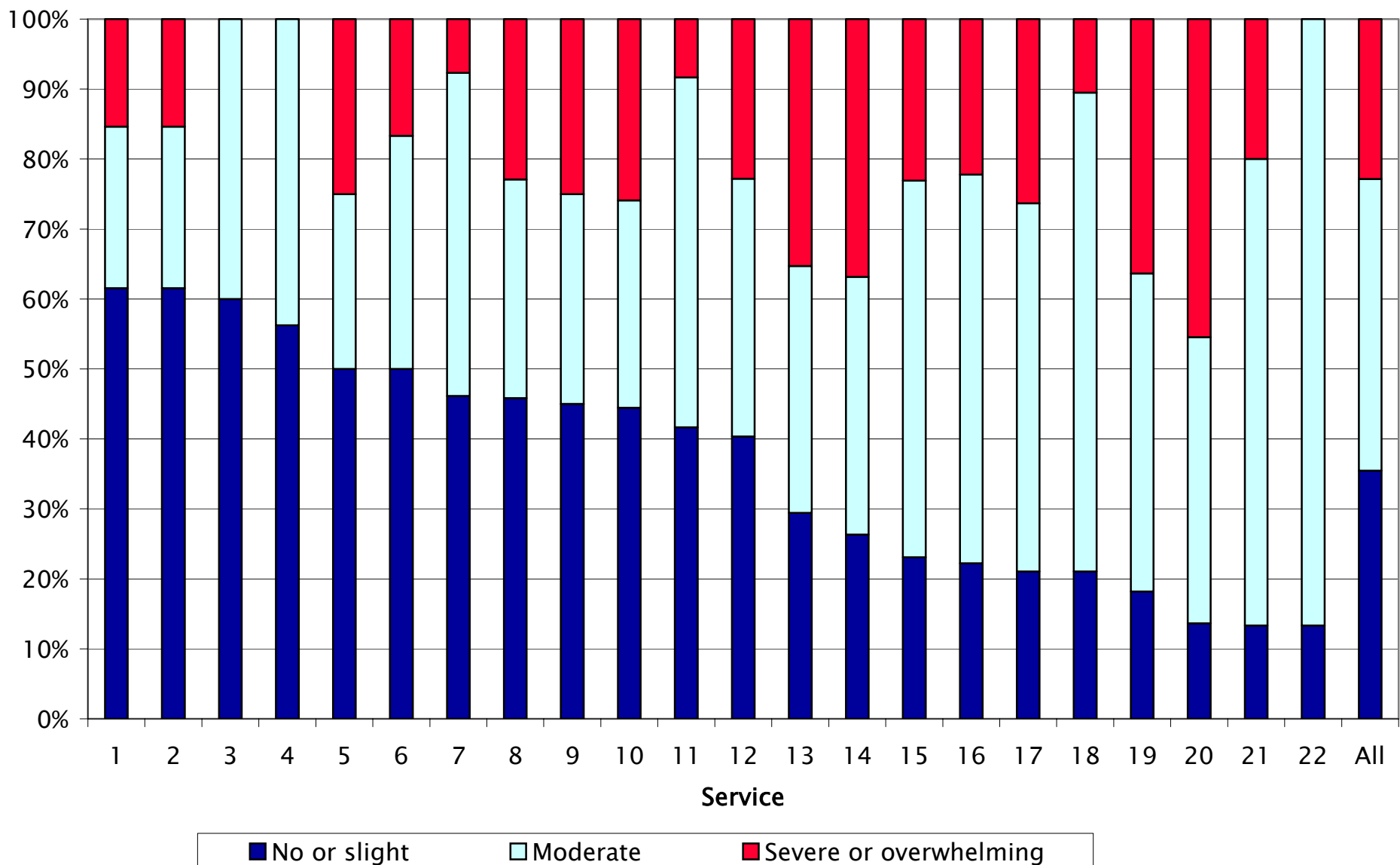


# A constant theme - unexplained variation

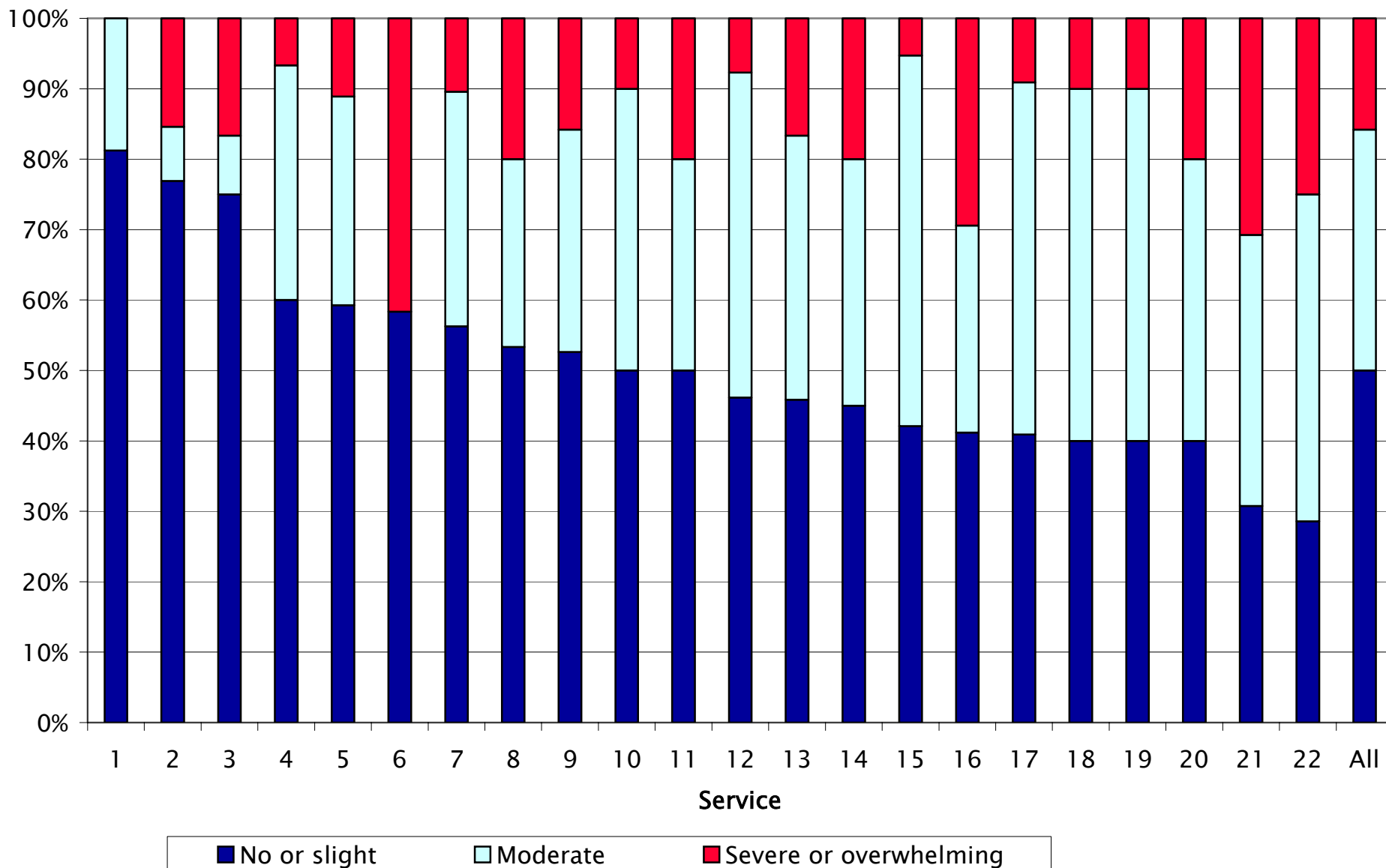
No matter what the measure, we find significant variations between services that we are working to understand and reduce.

Some examples...

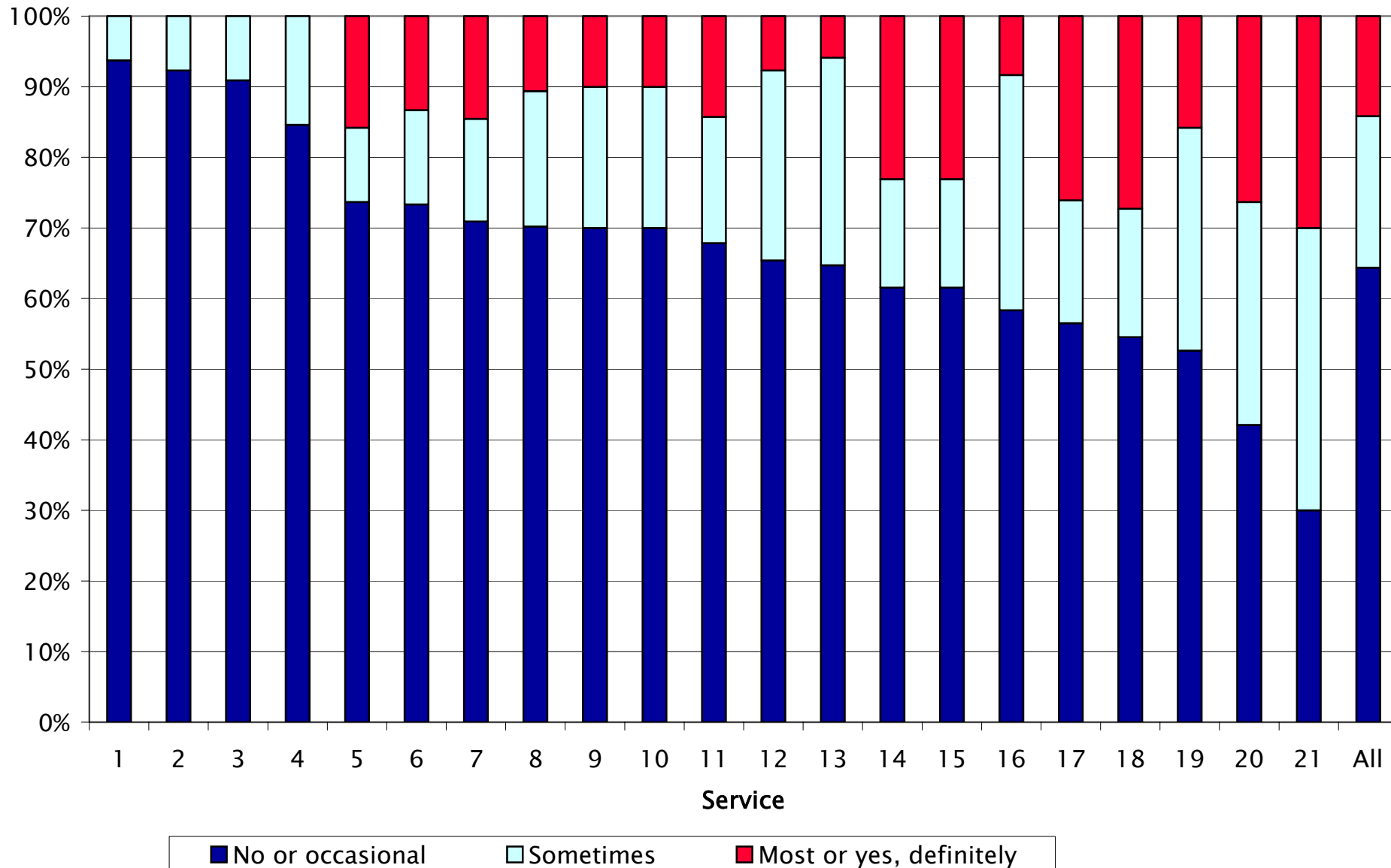
# Patients self-reported pain in last 3 days (Patient Outcome Scale V2)



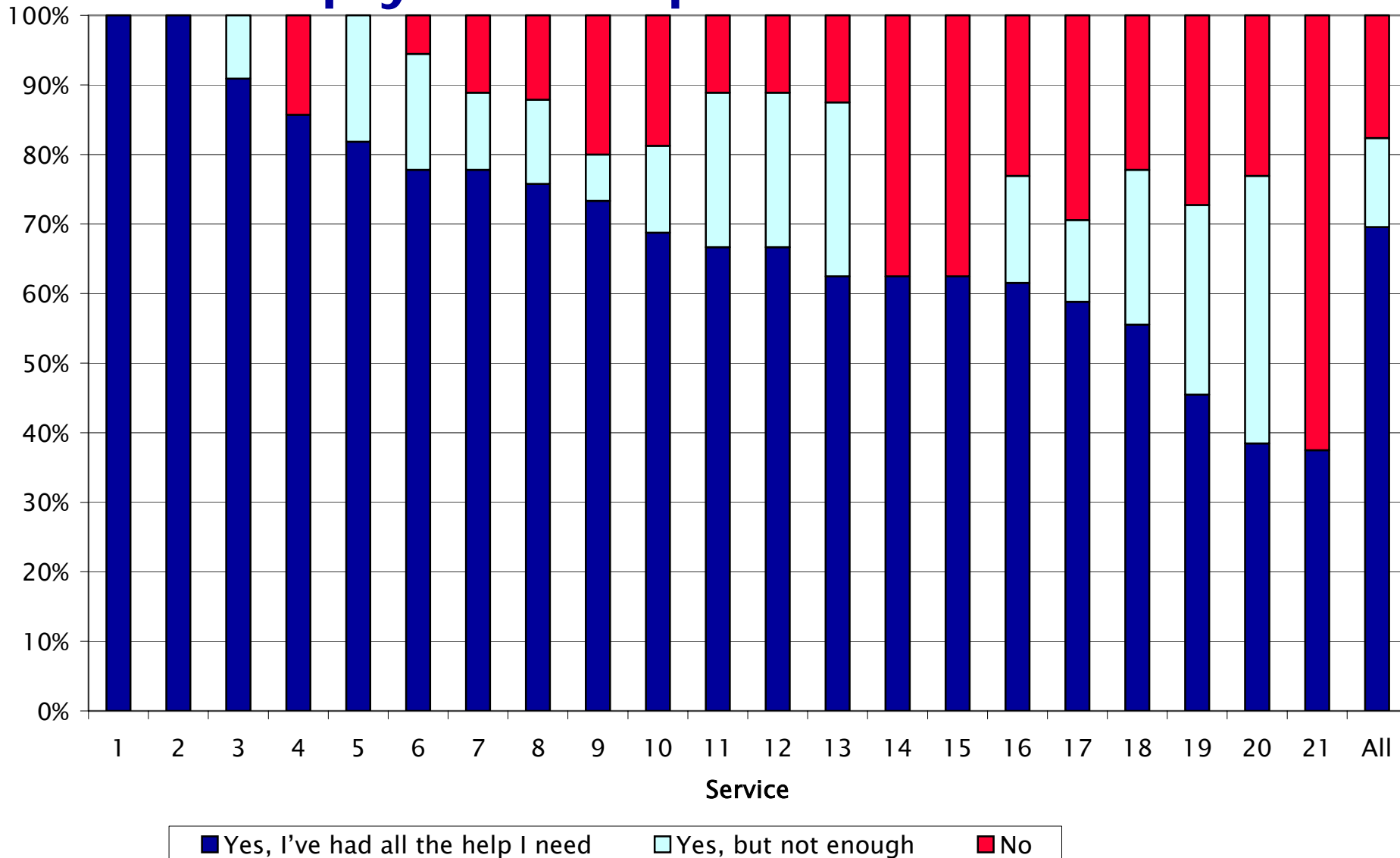
# Patients self-reported other symptoms in last 3 days (POS-2)



# Patients self-reported depression in last 3 days (POS-2)

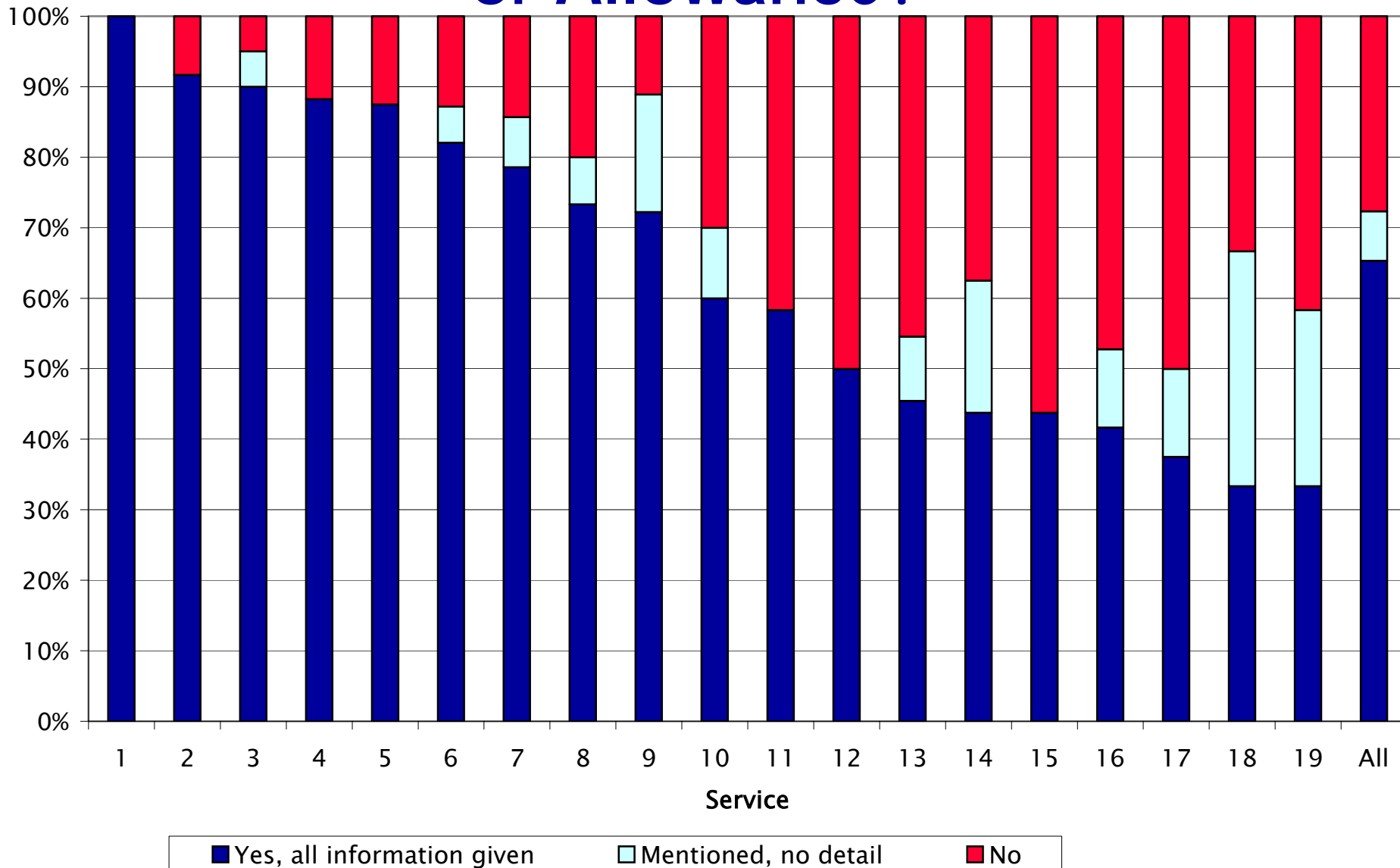


# Carers - Have you had someone to help you with practical tasks?

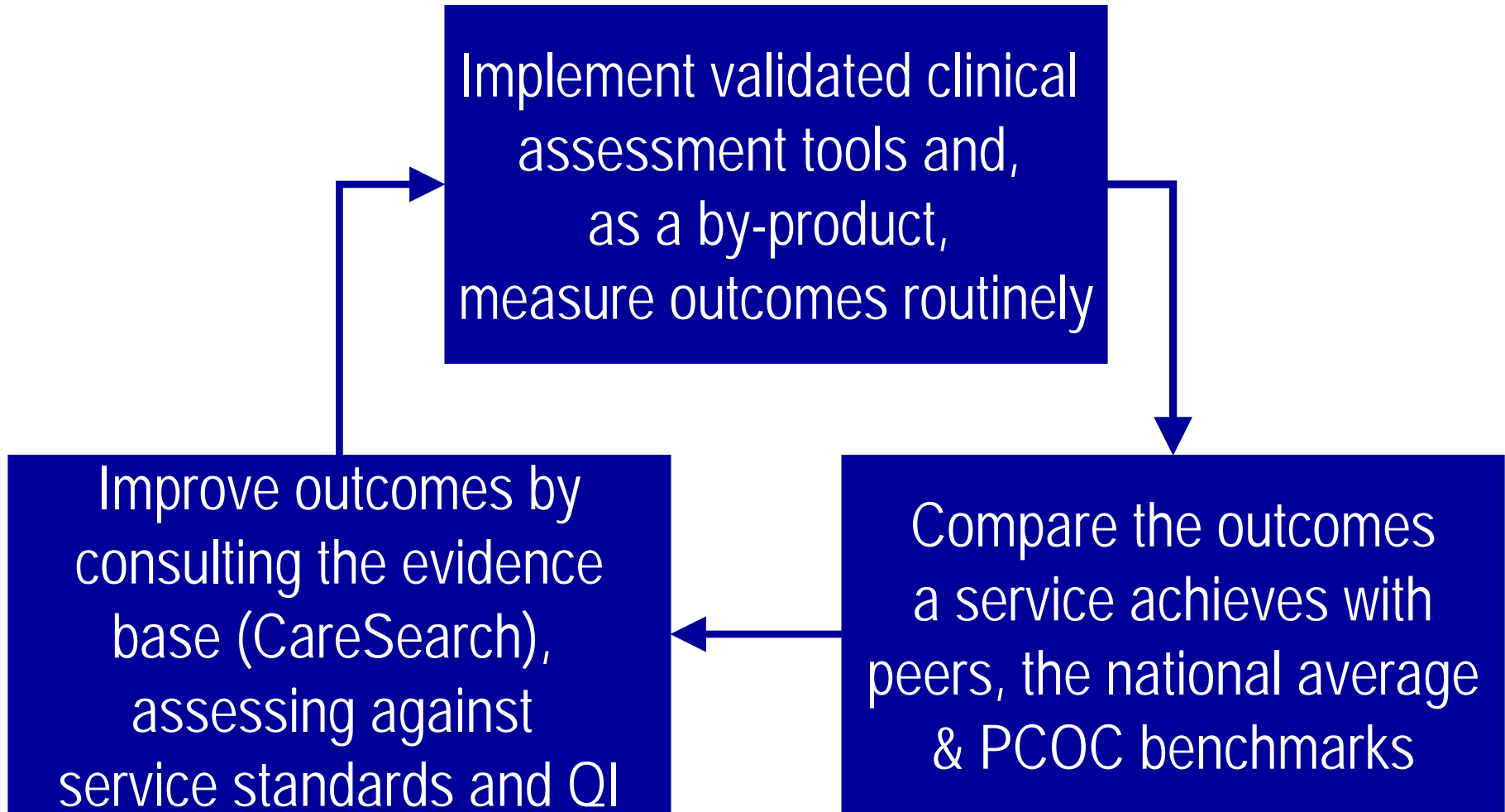


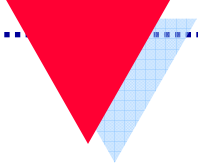


# Carers - Information on Carer Payment or Allowance?



# The PCOC approach





# Parallel universe 2

Casemix and ABF

# What I have learned in the last 30+ years

- ◆ No matter what I look at, I find significant variation between hospitals and between community health and care providers:
  - costs
  - quality
  - health outcomes
- ◆ Most of which can't be explained:
  - 'we're different', 'our patients are sicker', 'our clients have more needs'

# *TYPES OF VARIATION*

- 1 Variation due to differences in the kinds of patients treated
- 2 Variation due to differences in the ways that health services treat patients

# Casemix and Variation

- ◆ We must be able to control for one type of cause of variation in order to understand the other
- ◆ Casemix classifications help to control for variations between patients
- ◆ By controlling for variations between patients we produce information which can potentially help to understand the differences between providers
  - costs, quality, outcomes

# A definition of casemix

- ◆ The mix of cases
- ◆ The classification of patient episodes based on those patient attributes that best explain the cost of care ('cost drivers')
- ◆ A generic term
  - The Diagnosis Related Group classification is one casemix system
  - There are lots of others

# Known cost drivers in health care (1992)

- ◆ **acute inpatients**      Diagnosis, age, procedure (as a proxy for diagnosis)
- ◆ **rehabilitation**      Functional impairment, ability to manage Activities of Daily Living (ADLs)
- ◆ **mental health**      ADL function, symptom severity, social and economic circumstances, aggression
- ◆ **palliative care**      Pain, symptoms, carer support, ADL function
- ◆ **emergency**      Urgency, symptoms
- ◆ **neonatology**      Birth weight



# An observation

- ◆ The factors that drive costs are also measures of 'need' for health care as well as being the best predictors of health outcomes:
  - **Acute inpatients** - diagnosis, age, procedure
  - **Rehabilitation** - functional impairment, ability to manage Activities of Daily Living (ADLs)
  - **Mental health** - ADL function, symptom severity, social and economic circumstances
  - **Palliative care** - pain, symptoms, carer support, ADL function
  - **Emergency** - urgency
  - **Neonatology** - birth weight

# Implication

- ◆ If developed well, casemix classifications can be used to measure need for health care (at both the individual and population level) and measure both service quality and patient health outcomes
  - casemix-adjusted health outcomes
- ◆ The possibilities are endless!

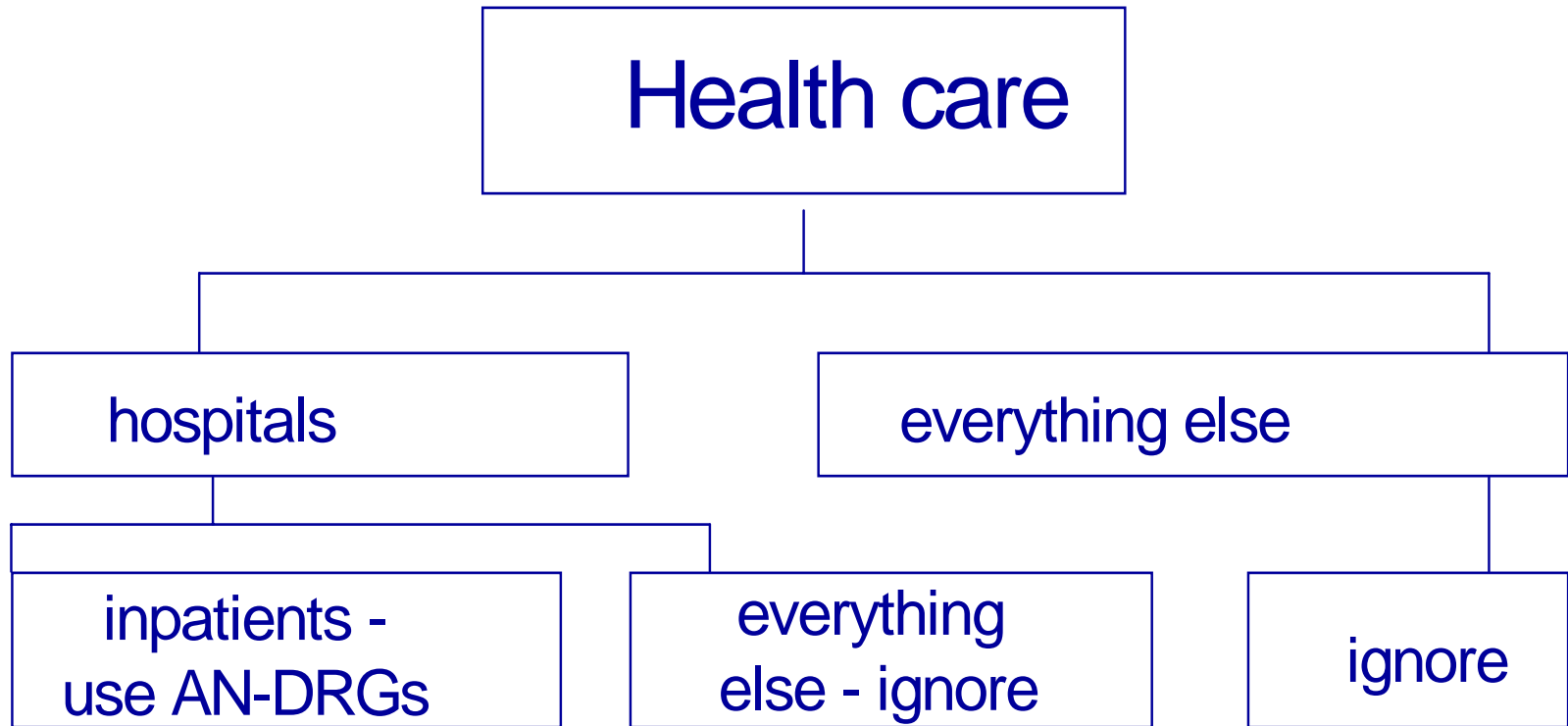


# A potted history of casemix in Australia

Q: Are we there yet?

A: No yet

# The original thinking behind using casemix in Oz and NZ



# Casemix systems

- ◆ 1992 - First Australian DRG system (AN-DRG)
- ◆ 1998 - AR-DRGs introduced, with progressive versions since

# Patient abstracting and coding (1992)

- ◆ “The DRG classification system should be used for the classification of acute patient episodes of care. It should not be used for the classification of all patients who are treated in an “acute” hospital.”
- ◆ Recommendation:
  - That there be three acuity levels (care types) termed acute, sub-acute and non-acute

# Patient abstracting and coding

- ◆ That the AN-DRG classification be used to classify only acute episodes of care.
- ◆ That the DRG classification system not be applied to sub-acute and non-acute episodes of care.
- ◆ That psychiatric episodes of care, regardless of acuity, be excluded from the DRG classification system

# 3 Care Types

- ◆ Diagnosis-related care (acute)
- ◆ Function-related care (sub-acute) and
- ◆ Supportive care (non-acute, including residential care and community substitutes)
  
- ◆ Mental Health
  - Contains elements of all 3 but is closer to function-related than diagnosis-related care

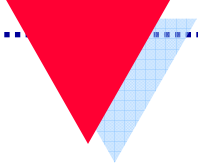


# Other casemix classifications would be required

- ◆ National acute care ambulatory classification system/s
  - emergency departments
  - outpatients
  - community health
- ◆ National sub-acute classification system
- ◆ National supportive care (non-acute) classification system
- ◆ National mental health classification system

# Mental Health in 2010

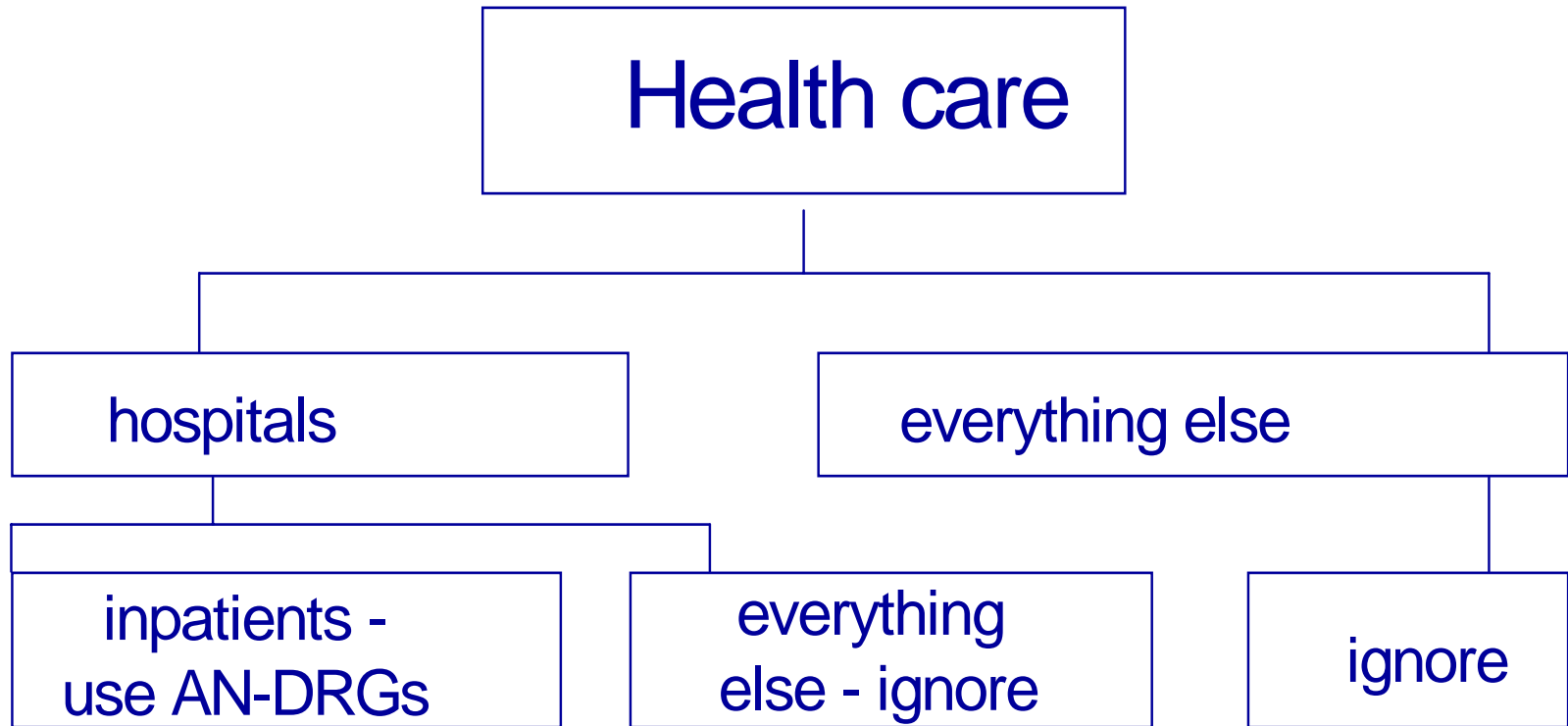
- ◆ Despite that recommendation in 1992 and two large studies in the intervening years:
  - Australian Mental Health Classification and Service Costs study (MH-CASC)
  - NZ Casemix and Outcomes Study (NZ-CAOS)
- ◆ Neither country has a national mental health classification that has been formally adopted for routine use
- ◆ Parallel universes - mental health outcome measurement and AR-DRGs for classification of inpatient episodes



# Some lost opportunities

“Tunnel vision”

# The way some people still think

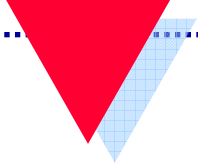


# There's more to health care than acute inpatient care!

- ◆ But, over 20 years on, the only classification that is recognised and supported at a national level in Australia is still the DRG system
- ◆ With virtually nothing known at the national level about other forms of care, their costs or their outcomes
  - including mental health

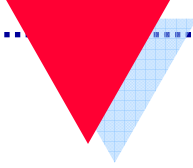
# Outpatients and community health

- ◆ Most development (by States) has focused on classifying occasions of service based on clinic names rather than the mix of cases
- ◆ Little or no progress in defining 'episodes of care' beyond inpatient. Instead, the level of counting and classification is the attendance/occasion of service. So:
  - can't measure outcomes
  - can't get the risk sharing right



# Australian health reform 2010

But first a little look back



# The starting point for our western health care system

New South Wales became a penal colony in 1788,  
followed progressively by the other Australian States.

Australia didn't became a country until 1901

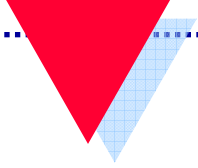


# A federation

- ◆ Commonwealth (national) government
- ◆ 6 State (previously colony) and 2 Territory governments
- ◆ Constitution (1901) - health is the responsibility of the States
  - Except quarantine matters
- ◆ Amended in 1946
  - To allow Commonwealth to provide health benefits and services to returned soldiers
- ◆ Commonwealth didn't have a role in health care until 1972 (Medibank)
  - Except for war veterans
- ◆ States and territories own all public health facilities and infrastructure

# Key Commonwealth responsibilities in 2010

- ◆ Pay doctors via Medicare Benefits Schedule (uncapped volume, capped prices)
- ◆ Pharmaceutical Benefits Scheme (uncapped volume, capped prices)
- ◆ Residential Aged Care (capped volume, capped prices)
- ◆ Fund States (capped funding grant independent of volume)



# Recent history

# 2007-2010

## A plethora of reviews and reforms

- ◆ Election commitments (including GP “Super Clinics”)
- ◆ National Healthcare Agreement and National Partnership Agreements between the Commonwealth and the states and territories 2008-2013
- ◆ National Prevention Taskforce
- ◆ National Primary Care Strategy
- ◆ “Australia 2020” summit recommendations
- ◆ National Health and Hospitals Reform Commission



# National Health and Hospitals Network Agreement (NHHNA)

Signed by COAG (except WA) in  
May 2010

# Brave new world

- ◆ Health system splits into 5
  - Hospitals - State responsibility
    - ◆ Funded 60:40 by Commonwealth and State
  - “Primary health care” - Commonwealth responsibility
  - “Aged care” including Home and Community Care (HACC) for people 65 years and over - Commonwealth
    - ◆ except Victoria
  - Disability services - State responsibility
    - ◆ All disability, HACC and residential care for people less than 65 years
  - Other population health - State responsibility

# New entities

## ◆ National

- Independent Hospital Pricing Authority (IHPA)
- National Performance Authority (NPA)

## ◆ State

- National Health and Hospital Network Funding Authority in each state
  - ◆ Each with a board of 3 supervisors - one State, one Commonwealth and an independent chair

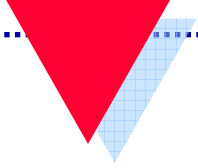
## ◆ Local

- Local Hospital Networks (LHN)
  - ◆ Local 'Health' Networks in NSW
- Primary Health Care Organisations (PHCO)
  - ◆ renamed 'Medicare Locals' in the 2010-11 budget

# Premise

- ◆ Hospitals - big white buildings surrounded by a fence
- ◆ Everything outside the fence is either 'primary care' or 'aged care' or a 'disability service'
  - no terms defined
- ◆ Specialist services outside the fence (public and private) not adequately recognised or addressed
  - where specialist community mental health services fits is still unresolved

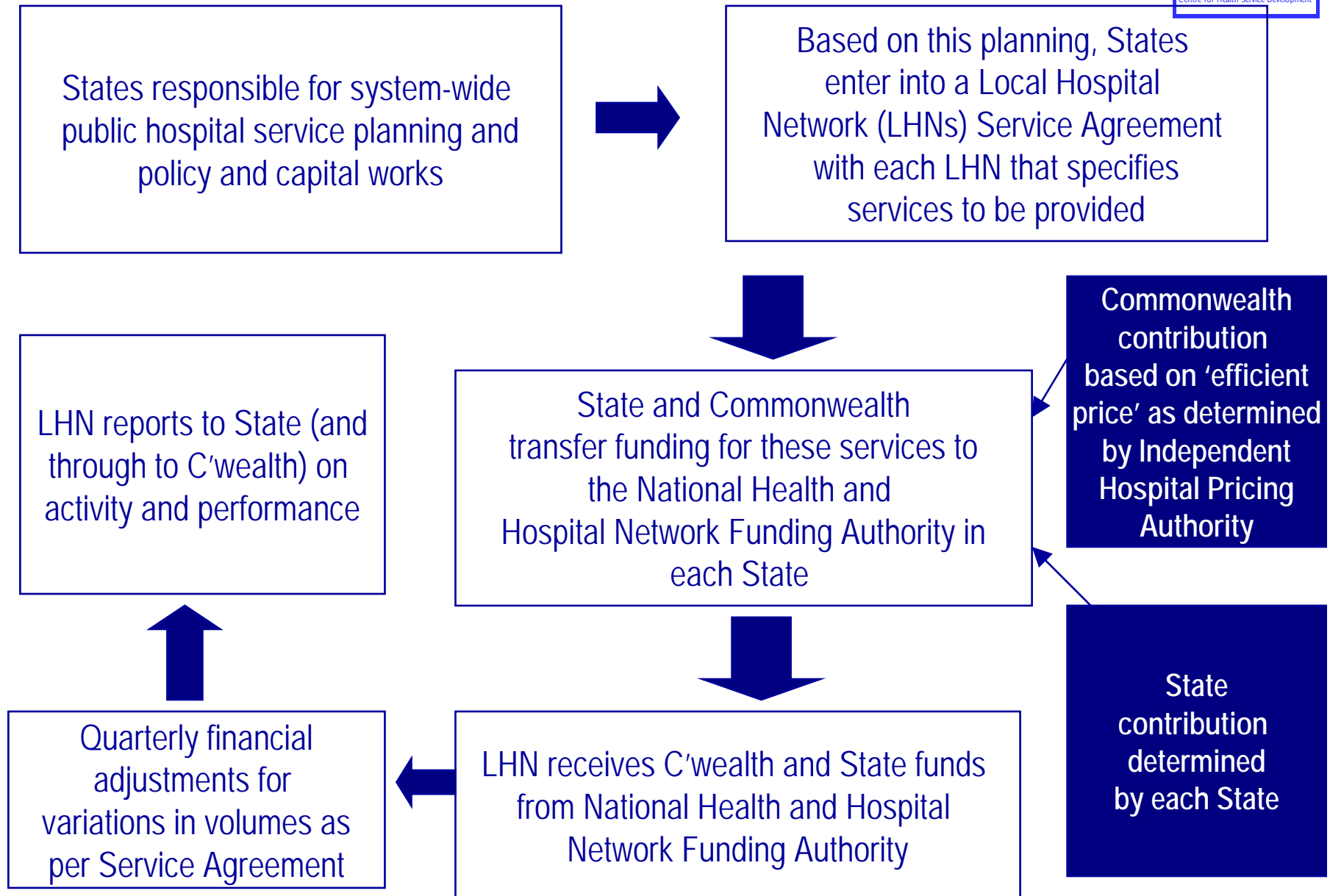




# Hospitals

# Commonwealth responsibilities

- ◆ Pay 60% of the 'national efficient price' of every public hospital service provided to public patients under agreed LHN Service Agreements
- ◆ Pay States (not LHNs) 60% contribution for research, training and block funding for small public hospitals
- ◆ "The Commonwealth will not intervene in matters concerning governance of LHNs or the negotiation and implementation of LHN Service Agreements"





Activity Based Funding (AKA  
'casemix' or 'episode' funding)

# ABF - 2 national agreements

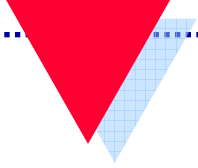
- ◆ **2008 National Partnership Agreement (NPA) on Hospital and Health Workforce Reform**
  - Nationally consistent ABF
  - 5 streams - acute admitted, ED, subacute, outpatient services & “hospital-auspiced community health services”
    - ◆ nationally consistent classifications and data collections for each of these streams
  - mental health not mentioned but was specified for a separate approach in the accompanying workplan
- ◆ **2010 National Health and Hospitals Network Agreement**
  - Acceleration of the 2008 NPA
  - Mental health again not specifically mentioned

# National Efficient Price

- ◆ Based on the cost of the efficient delivery of public hospital services
- ◆ Adjusted 'for a small number of loadings, to reflect variations in wage costs and other legitimate and unavoidable inputs which affect the costs of service delivery, including:
  - hospital type and size
  - hospital location, including regional and remote status and
  - patient complexity, including Indigenous status'

# Summary of key MH issues

- ◆ Mental health drew short straw on the money in both national reform negotiations and in 2010 national election
- ◆ Governance for specialist community mental health services not resolved
  - Implications of potentially splitting inpatient and community?
    - ◆ Inpatient is part of LHNs, with 60:40 funding via State Funding Authority
    - ◆ Disability and related services 100% funded by State
    - ◆ Community is potentially 100% funded by Commonwealth (what mechanism?)
- ◆ Activity based funding for mental health in all settings
  - Independent Hospital Pricing Authority
  - No separate classification of mental health activity in NHHA agreement but is specified in the workplan for the 2008 NPA on ABF
- ◆ Some mental health included under 'subacute' umbrella
  - subacute ABF, subacute care reporting requirements etc?



The future



# National report cards

- ◆ National Performance Authority to produce web-based national report cards on each hospital and PHCO
- ◆ How will they do this fairly for mental health if they can't casemix (risk) adjust?

# New models of care

- ◆ Acute inpatient classification has been progressively refined over 20 years (at a high cost), while...
- ◆ New models of care have been developing elsewhere
  - in the community
- ◆ And we have almost no systems in place to classify these new models or to routinely assess the impact or value for money of substitutable models
- ◆ Developing these systems is 20 years overdue

# Principal Diagnosis

- ◆ The concept of a Principal Diagnosis is increasing problematic
- ◆ Changing patterns of morbidity
  - more people with multiple chronic diseases and
- ◆ Changing models of care
  - less people admitted to hospital with a clear principal diagnosis
- ◆ Time to revisit ideas such as disease staging and disease clusters?

# The need to measure patient 'experiences' rather than 'satisfaction'

- ◆ Most people (typically 90%) are satisfied with the services they receive
  - hospitals, airlines, hotels, public transport
- ◆ Systematic biases in satisfaction surveys, eg
  - older patients generally more satisfied than younger patients
  - poorer patients are generally more satisfied than wealthier patients
- ◆ Experiences are more directly linked to actions that can be taken to improve quality
- ◆ More public reporting of patient and carer experiences?

# Patient centred care

- ◆ Access
- ◆ Respect for patients' values, preferences and expressed needs
- ◆ Coordination and integration of care
- ◆ Information, communication and education
- ◆ Physical comfort
- ◆ Emotional support and alleviation of fear and anxiety
- ◆ Involvement of family and friends
- ◆ Transition and continuity

<http://www.pickerinstitute.org>

# A better future

- ◆ Outcomes ideas are terrific - it's time that we start measuring them on a routine basis and using the results to drive practice improvement
- ◆ Casemix ideas are terrific – it's time that we start using them to help with the real challenges:
- ◆ Recognise that services of equal *cost* are not of equal *value* (and that services of equal *value* are not of equal *cost*)
- ◆ Shift the concerns:
  - ◆ from *cost* to *value for money*,
  - ◆ from *outputs* to *outcomes*.

# A final question

Scenario: *The Health Minister announces that she/he wishes to introduce public report cards for all services, including mental health. She wants to know whether Mental Health Outcome Reports that identify each service should be posted on the web.*

*She/he also wants to know whether to introduce 'Paying for Performance' and pay more to services that achieve the best outcomes.*

What advice will you give?